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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/366,849	08/04/1999	PETER A. BARANY	NORT-0004-US	3574

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EXAMINER

TRAN, THIEN D

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/366,849	Applicant(s) BARANY ET AL. TB	
	Examiner Thien D Tran	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being participated by Raith et al (U.S Patent No 6,430,417 B1).

Regarding claims 1, 25, Raith discloses a method for use in a mobile communications system having a plurality of cell segments, comprising:

communicating control and traffic signaling in a frame having a plurality of time slots in each cell segment (figure 1), the time slots being time synchronized among the cell segments (col.5 lines 55-67,); and

transmitting control signaling in time slots adjacent time slots allocated as guard periods to protect the control signaling in a time slot of a first cell segment from

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interference by traffic signaling in another time slot of a neighboring cell segment. See col.11 lines 45-65.

Regarding claim 2, Raith discloses a method, wherein transmitting the control signaling includes transmitting the control signaling in every other time slot of each frame. See figures 5.

Regarding claim 3, Raith discloses a method, wherein communicating the control and traffic signaling includes communicating the control signaling in next to data slot (Could be that the control signal in odd time slots of each frame). See col.12 lines 25-40, col.15 lines 55-65..

Regarding claim 4, Raith discloses a method, wherein each time frame includes time slots 0, 1, 2, 3, 4, 5, 6, and 7, and wherein the transmitting includes transmitting the control signaling in time slots 1, 3, and 5. See col.15 lines 55-65.

Regarding claim 5, Raith discloses a method, wherein each time frame includes time slots 0, 1, 2, 3, 4, 5, 6, and 7, and wherein the transmitting includes transmitting the control signaling in time slots 1, 3, 5, and 7. See col.16 lines 1-20.

Regarding claim 6, Raith discloses a method, wherein transmitting the control signaling includes transmitting one of a synchronization burst and a frequency correction burst. See col.13 lines 1-30.

Regarding claim 7, Raith discloses a method for use in a mobile communications system having a plurality of cell segments, comprising:

defining a plurality of channels and a frame having a plurality of time slots;

providing a channel reuse pattern that is based on a plurality of channel frequencies and a plurality of time groups, wherein signaling is transmitted in different time slots of the frame in corresponding time groups; and

providing predetermined time slots as guard periods to reduce likelihood of interference of signaling due to overlap of time slots in neighboring cell segments. See col.14 lines 20-60.

Regarding claim 8, Raith discloses a method, wherein providing time slots as guard periods including setting the time slots to be idle. See col.17 lines 41-55.

Regarding claim 9, Raith discloses a method, wherein the defining includes defining a frame having eight time slots. See figure 8

Regarding claim 10, Raith discloses a method comprising allocating control signaling to be carried in odd time slots of each frame. See figures 9.

Regarding claim 11, Raith discloses a method for use in a mobile communications system, comprising:

carrying control signaling in a multiframe that includes a plurality of frames, each frame including a plurality of time slots;

communicating control signaling in predetermined time slots of predetermined frames; and

communicating idle periods in time slots adjacent the predetermined time slots of the predetermined frames. See col.17 lines 40-65.

Regarding claim 12, Raith discloses a method, wherein each frame includes eight time slots, and wherein communicating the control signaling includes

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communicating the control signaling in odd time slots of the predetermined frames. See col.18 lines 15-40.

Regarding claim 13, Raith discloses a method, wherein communicating the idle periods includes communicating the idle periods in even time slots of the predetermined frames. See col.17 lines 40-45.

Regarding claim 14, Raith discloses a method, wherein each frame includes time slots 0, 1, 2, 3, 4, 5, 6, and 7, and wherein communicating the control signaling includes communicating the control signaling in time slots 1, 3, and 5, and communicating the idle periods includes communicating the idle periods in time slots 0, 2, and 4. See col.17 lines 1-40.

Regarding claim 15, Raith discloses a method, wherein each frame includes time slots 0, 1, 2, 3, 4, 5, 6, and 7, and wherein communicating the control signaling includes communicating the control signaling in time slots 1, 3, 5, and 7, and wherein communicating the idle periods includes communicating the idle periods in time slots 0, 2, 4, and 6. See col.15 lines 55-67.

Regarding claim 16, Raith discloses a method comprising communicating traffic in at least some of the frames other than the predetermined frames. See col.17 lines 10-25.

Regarding claim 17, Raith discloses an apparatus for use in a mobile communications system having a plurality of cell segments, comprising:

an interface unit capable of communicating with the cell segments; and

a controller adapted to control communications of control and traffic signaling in a frame having a plurality of time slots in each cell segment, the time slots being synchronized among the cell segments, the controller further adapted to define guard periods each including at least one time slot to protect control signaling communicated in a time slot from interference due to overlap of time slots in neighboring cell segments. See col.15 lines 55-67, col.16 lines 1-30.

Regarding claim 18, Raith discloses an apparatus, wherein the controller is capable of communicating packet data between a data network and a mobile unit in one of the cell segments. See figure 1.

Regarding claim 19, Raith discloses an apparatus comprising a second controller capable of communicating circuit-switched traffic between mobile units in the cell segments. See col.4 lines 15-60.

Regarding claims 20, 26, Raith discloses an apparatus, wherein the controller is adapted to define a channel reuse pattern based on frequencies and time groups, control signaling being carried in different time slots of the frame in corresponding time groups. See figure 9.

Regarding claim 21, Raith discloses a method for use in a mobile communications system having a plurality of cells each divided into three sectors, comprising:

- allocating a channel frequency to each cell sector;
- defining N time groups;
- defining a frame having eight time slots;

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providing an effective $N/(3*N)$ channel reuse pattern that is based on the channel frequencies and the plurality of time groups, wherein signaling is carried in a different time slot of the frame in each time group; and

allocating predetermined time slots in the frame as guard periods to reduce likelihood of interference of signaling due to overlap of time slots between neighboring cell sectors. See col.15 lines 25-60.

Regarding claim 22, Raith discloses a method for use in a mobile communications system having a plurality of cell segments, comprising:

measuring control signaling carried in one or more of a plurality of time slots of a frame in a first cell segment and in a neighboring cell segment; and

receiving control signaling in a first time slot adjacent a second time slot defined as part of a guard period to reduce likelihood of interference caused by overlap of time slots between the first cell segment and the neighboring cell segment. See figure 1, col.16 lines 30-45, col.6 lines 55-65.

Regarding claim 23, Raith discloses a method, wherein the measuring includes measuring control signaling in time slots that are synchronized between the first and neighboring cell segments. See col.17 lines 25-60.

Regarding claim 24, Raith discloses a mobile unit for use in a mobile communications system, comprising:

a transceiver to transmit and receive control and traffic signaling carried in frames each having a plurality of time slots; and

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a control unit adapted to receive control signaling carried in time slots adjacent idle time slots defined as guard periods. See col.12 lines 5-55.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Raith et al (US Patent No. 5,818,829).

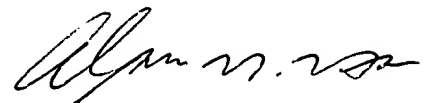
-Choi et al (US Patent No. 6,272,117 B1).

-Mazur et al (US Patent No. 6,438,115 B1).

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (703) 308-4388. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thien Tran



ALPUS H. HSU
PRIMARY EXAMINER